

## Important revision to ICMJE

- Last major update 2008
- Extensive rewrite and reorganization August 2013

Uniform Requirements for MS (URM)



Recommendations for the conduct, reporting, editing, and publication of scholarly work in medical journals



## Authorship criteria

### 2008

- 1) substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data
- 2) drafting the article or revising it critically for important intellectual content

### 2013

- 1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
- 2. Drafting the work or revising it critically for important intellectual content; AND



## Authorship criteria (contd)

### 2008

- 3) final approval of the version to be published.

### 2013

- 3. Final approval of the version to be published; AND
- 4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any parts of the work are appropriately investigated and resolved.



## More on author accountability

- “In addition to being accountable for the parts of the work he or she has done, an author should be able to identify which co-authors are responsible for specific other parts of the work. In addition, authors should have confidence in the integrity of the contributions of their co-authors.”



## ?All authors are guarantors

2008

- Some journals .. request that one or more authors, referred to as “guarantors”, be identified as the persons who take responsibility for the integrity of the work as a whole, from inception to published article, and publish that information

2013

- 



## Author selection

- “The individuals who conduct the work are responsible for identifying who meets these criteria and ideally should do so when planning the work, making modifications as appropriate as the work progresses.”

GPP2 states that the publication agreement should "confirm the authors' responsibilities to: ensure authorship is attributed appropriately"



## Author selection

- “The criteria are not intended for use as a means to disqualify colleagues from authorship who otherwise meet authorship criteria by denying them the opportunity to meet criterion #s 2 or 3. Therefore, all individuals who meet the first criterion should have the opportunity to participate in the review, drafting, and final approval of the manuscript.”



## Group authorship

### 2008

- Increasingly, authorship of multicenter trials is attributed to a group. All members of the group who are named as authors should meet the above criteria for authorship/contributorship

### 2013

- All members of the group named as authors should meet all four criteria for authorship, including approval of the final manuscript, and they should be able to take public responsibility for the work and should have full confidence in the accuracy and integrity of the work of other group authors.



## Group authorship (2)

2008

- 

2013

- Some large multi-author groups designate authorship by a group name, with or without the names of individuals. When submitting a MS authored by a group, the corresponding author should ... clearly identify the group members who can take credit and responsibility for the work as authors.



## Collaborators (new in 2013)

- “The byline of the article identifies who is directly responsible for the MS, and MEDLINE lists as authors whichever names appear on the byline. If the byline includes a group name, MEDLINE will list the names of individual group members who are authors or who are **collaborators**, sometimes called non-author contributors, if there is a note associated with the byline clearly stating that the individual names are elsewhere in the paper and whether those names are authors or collaborators.”



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N Engl J Med. 2013 Dec 12;369(24):2283-93. doi: 10.1056/NEJMoa1310669. Epub 2013 Nov 19.

**A pharmacogenetic versus a clinical algorithm for warfarin dosing.**

Kimmel SE, French B, Kasner SE, Johnson JA, Anderson JL, Gage BF, Rosenberg YD, Eby CS, Madigan RA, McBane RB, Abdel-Rahman SZ, Stevens SM, Yale S, Mohler ER 3rd, Fang MC, Shah V, Horenstein RB, Limdi NA, Muldowney JA 3rd, Guiral J, Delafontaine P, Desnick RJ, Ortel TL, Billett HH, Pendleton RC, Geller NL, Halperin JL, Goldhaber SZ, Caldwell MD, Califf RM, Ellenberg JH; COAG Investigators.

Collaborators (198)

Author information Open/close investigator list

**Abstract**

**BACKGROUND:** The clinical utility of genotype-guided (pharmacogenetically based) dosing of warfarin has been tested only in small clinical trials or observational studies, with equivocal results.

**METHODS:** We randomly assigned 1015 patients to receive doses of warfarin during the first 5 days of therapy that were determined according to a dosing algorithm that included both clinical variables and genotype data or to one that included clinical variables only. All patients and clinicians were unaware of the dose of warfarin during the first 4 weeks of therapy. The primary outcome was the percentage of time that the international normalized ratio (INR) was in the therapeutic range from day 4 or 5 through day 28 of therapy.

**RESULTS:** At 4 weeks, the mean percentage of time in the therapeutic range was 45.2% in the genotype-guided group and 45.4% in the clinically guided group (adjusted mean difference, [genotype-guided group minus clinically guided group], -0.2; 95% confidence interval, -3.4 to 3.1; P=0.91). There also was no significant between-group difference among patients with a predicted dose difference between the two algorithms of 1 mg per day or more. There was, however, a significant interaction between dosing strategy and race (P=0.003). Among black patients, the mean percentage of time in the therapeutic range was less in the genotype-guided group than in the clinically guided outcome of any INR of 4 or more, major bleeding, or thromboembolism.

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Collaborators (198)

Open/close investigator list

McBane RB, Metzger K, Lexvold N, Streichert-Blair A, Wysokinski W, Ransone TJ, Le D, Christiansen P, Abdel-Rahman SZ, Clark CA, Snow LE, vonMarrensdorff H, Anderson JL, Horenstein RB, Horenstein RB, Garcia C, Albright KJ, Mitchell C, Stevens SM, Woller SC, Peterson CP, Butler AR, Carlquist JF, Yale S, Kohhorst D, Strey SK, Burmester JK, Schmeitler J, Caldwell M, Mazza JJ, Bhupathi S, Johnson JA, Lopez L, Zumberg M, Langaae T, Elewa H, Shahin M, Mohamed M, Chang SS, Mohler ER 3rd, Medenilla E, Rivera G, van Deerin V, Fang MC, Magan Y, Shin J, Yglecias L, Wu A, Shah V, Kaatz S, Ellsworth S, Gilkas H, Chitale D, Horenstein RB, Zhao RY, Shuldiner AR, Marron J, Fred-Omoicic O, Kiser K, Sturpe D, Lee M, Limdi NA, Brown TM, Alexander J, Messiaen LM, Hill R, Dudley A, Muldowney JA 3rd, Neal T, Freehardt D, Vnencak-Jones C, Guiral J, Sharma G, Smith C, Best P, Elewa H, Deremer CE, Keller KJ, Liu S, Wang CY, Delafontaine P, Trimpfen A, Ali G, Arain S, O'Meallie L, Martin-Schild SB, McDuffie R, Japa S, Asafu-Adjaye ND, Bowers S, Floty-Childress S, Morrison E, Desnick RJ, Halperin JL, van der Zee S, Rothlauf E, Cohen I, Doherty DD, Blanchard L, Scott S, Ortel TL, Gleim MA, Sexton PA, Hall S, Jordan L, Billett HH, Naeem RC, Maala-Gentolia C, Gage BF, Do E, Venker B, Pendleton RC, Napoli L, Rondina M, McMullin G, Califf RM, Abdel-Rahman SZ, Anderson JL, Billett HH, Bookman E.

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## Contributors

### 2008

- All contributors who do not meet the criteria for authorship should be listed in an acknowledgments section. Examples ... include .. a person who provided purely technical help, writing assistance ...

### 2013

- Contributors who meet fewer than all 4 of the above criteria for authorship should not be listed as authors, but they should be acknowledged. Examples include ... writing assistance, technical editing, language editing, and proofreading.



## Acknowledgees

### 2008

- Because readers may infer their endorsement of the data and conclusions, these persons must give written permission to be acknowledged.

### 2013

- Because acknowledgment may imply endorsement by acknowledged individuals of a study's data and conclusions, editors are advised to require that the corresponding author obtain written permission to be acknowledged from all acknowledged individuals



## What are journals doing?

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## The Lancet – author statement form

### THE LANCET

#### Author statements

Please insert the relevant text under the subheadings below. A completed form must be signed by all authors. Please note that we cannot accept electronic signatures; all authors must sign by hand. Please complete multiple forms if necessary, and upload the signed copy with your submission, scan and email to: [eesTheLancet@lancet.com](mailto:eesTheLancet@lancet.com), or fax to: +44 1865 853016.

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#### Authors' contributions

Please insert here the contribution each author made to the manuscript—eg, literature search, figures, study design, data collection, data analysis, data interpretation, writing etc. If all authors contributed equally, please state this. The information provided here must match the contributors' statement in the manuscript.

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## Lancet – author statement form

- List author contributions (must match contributors' statement in the manuscript)
- Role of funding source
- Conflicts of interest
- ***“I agree with: the plan to submit to *The Lancet*; the contents of the manuscript; to being listed as an author; and to the conflicts of interest statement as summarised. I have had access to all the data in the study (for original research articles) and accept responsibility for its validity.”***

## BMJ

- Ref to ICMJE 4 criteria
- Contributorship
  - “The *BMJ* lists contributors in two ways. Firstly, we publish a list of authors' names at the beginning of the paper and, secondly, we list contributors (some of whom may not be included as authors) at the end of the paper, giving details of who did what in planning, conducting, and reporting the work.”
- Guarantor
  - “One or more of these contributors are listed as guarantors of the paper. The guarantor accepts full responsibility for the work and/or the conduct of the study, had access to the data, and controlled the decision to publish.”

## BMJ contd

- Group authorship
  - “If there is a very large number of authors we may ask for confirmation that everyone listed met the ICMJE criteria for authorship. If they did, we may then suggest that the authors form a group whose name will appear in the article byline.
  - We appreciate that authors may be concerned that their work will not be properly recognised if they form a group, but this is unfounded. [MEDLINE guidance](#) can handle group authorship and still give each individual due credit ...”



## BMJ: Group authorship

- “if authors form a group for the article's main byline they will also be listed individually:
- as collaborators in the article's Medline/PubMed record
  - as authors in a group authorship statement at the end of the article on bmj.com
  - as contributors in the contributorship statement at the end of the article on bmj.com”



## JAMA

- Still cites **old** ICMJE criteria.... (as at Dec 2013)
- Use authorship form
- checkbox style (based on old ICMJE criteria)

B. I have given final approval of the manuscript for publication.

C. I have participated sufficiently in the work to take responsibility for (check 1 of 2 below)

part of the content.

the whole content.

D. To qualify for authorship, you must have made substantial contributions to the work for each of the 3 categories of contribution. I have made substantial contributions to the paper as described below (check at least 1 of the 3 below)

1. (check at least 1 of the 3 below)

conception and design

acquisition of data

analysis and interpretation

2. (check at least 1 of 2 below)

drafting of the manuscript

critical revision of the manuscript to substantively affect content

3. (check at least 1 below)

will be updating  
I for A in early  
2014



## NEJM

### Authorship

- cites 2013 ICMJE plus
- “It is the responsibility of every person listed as an author of an article published in NEJM to have contributed in a meaningful and identifiable way to the design, performance, analysis, and reporting of the work, and agree to be accountable for all aspects of the work.”



## How many journals list contributors?

- No recent global data
- ICMJE strongly recommends this
- Survey of 234 journal IforAs in 2006 found only 21 (9%) described individuals' contributions
  - [Wager Medscape General Medicine 2007;9:16](#)
- Survey of 59 Indian medical journals in 2010 found that 30 (51%) required contributions to be described
  - [Jaykaran et al Indian J Med Ethics 2011;8:36-8](#)
- Survey of 49 Pakistani medical journals in 2008 found that only 1 (3%) required contributions to be described
  - [Samad et al Pak J Med Sci 2009;6:879-82](#)



## Neurology does not follow ICMJE

- *Neurology* defines an author as a person who has made a substantive **intellectual contribution** to the submitted manuscript. A substantive contribution includes **one or more** of the following:
  - Design or conceptualization of the study
  - **OR** analysis or interpretation of the data
  - **OR** drafting or revising the manuscript for intellectual content
- Professional writers employed by pharmaceutical companies or other academic, governmental, or commercial entities who have drafted or revised the intellectual content of the paper **must** be included as authors.



## EMWA guidelines on role of medical writers

- In most publications reporting clinical trials, a medical writer who has not been involved in study design, data analysis, or interpretation will **not** qualify to be listed as an author according to the Vancouver criteria
- However, they may qualify for authorship of **review articles**, for example if they have conducted an extensive literature search

Do we need different criteria for different types of article?



## Who should set authorship criteria?

- Researchers themselves
- Institutions
- Funders
- Journals
- **Collaboration**
- What about multi-disciplinary research?



## Order of author listing remains problematic

- ?Should journals provide guidance on this
- Important in academic reward systems



## Harvard policy

- *“Many different ways of determining order of authorship exist across disciplines, research groups, and countries. Examples of authorship policies include descending order of contribution, placing the person who took the lead in writing the manuscript or doing the research first and the most experienced contributor last, and alphabetical or random order. While the significance of a particular order may be understood in a given setting, order of authorship has no generally agreed upon meaning.*
- *As a result, it is not possible to interpret from order of authorship the respective contributions of individual authors. Promotion committees, granting agencies, readers, and others who seek to understand how individual authors have contributed to the work should not read into order of authorship their own meaning, which may not be shared by the authors themselves.”*

<http://hms.harvard.edu/about-hms/integrity-academic-medicine/hms-policy/faculty-policies-integrity-science/authorship-guidelines>



## Finally, some good news!

- ORCID
- Open Researcher & Contributor ID



## Author identification:



- Provides a 'persistent digital identifier' for individual researchers
- Not-for-profit consortium
- Adopted by several major journals (incorporated into MS workflow)
- Useful for author databases

### Aries customers activate ORCID feature in EM

Aries Systems, an **ORCID** launch partner and sponsor, has integrated Editorial Manager and Production Manager with the registry, allowing publications to accept ORCID's from authors, co-authors, reviewers, and editors.



Public Library of Science (PLOS), Springer, and Wolters Kluwer rank among Aries customers who have activated the EM functionality for collection and workflow assimilation of unique identifiers.



Shows previous name

445,324 IDs and counting ...

445324 ORCID iDs and counting See more...

Elizabeth Wager  
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View Public ORCID Record  
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Also known as:  
Elizabeth Healing

Keywords: authorship, conflict of interest, research misconduct, research reporting, peer review

Websites:  
http://www.lizwager.com

Other IDs:  
Scopus Author ID: 7004180047

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Personal Information Update

Biography  
Self-employed publications consultant, trainer, writer, editor and peer-review researcher. Former Chair, Committee on Publication Ethics (COPE) (2009-2012). Visiting Professor, Medical School, University of Split, Croatia.

Education Add Education Manually

University of Oxford (09-1980 to 06-1983)  
MA

University of Split (07-2010)  
PhD

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## Conclusions

- **ICMJE authorship criteria** have changed
- Check your journal instructions if you refer to ICMJE
- Need to educate / inform authors
- Consider an editorial and/or authorship form
- **Contributorship** = useful for readers
  - may prevent ghost or guest authors
  - ?not understood by academia

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